



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,849	12/03/2003	Stanford R. Ovshinsky	HS-124	5637
24963 7590 10/04/2007 ENERGY CONVERSION DEVICES, INC. 2956 WATERVIEW DRIVE ROCHESTER HILLS, MI 48309			EXAMINER PHASGE, ARUN S	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 10/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/726,849	Applicant(s) OVSHINSKY ET AL.	
	Examiner Arun S. Phasge	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-20 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollenberg, U.S. Patent 5,512,145 in view of Ichinose et al. (Ichinose), U.S. Patent 5,859,397.

The Hollenberg patent discloses the claimed method and apparatus for the electrolytic purification of brackish water, comprising a photovoltaic device, an

Art Unit: 1753

anode in electrical communication with water, a cathode in communication with water, producing hydrogen and oxygen gas at the electrodes and a reaction chamber for reacting said hydrogen and oxygen gases to form water (see claims 1-61). The patent further teaches the storage of the hydrogen in a metal hydride (see abstract and claims). The use of hydrogen and oxygen in a fuel cell to produce electricity is disclosed in col. 8, lines 48-55). The purification of hydrogen before storage is disclosed in col. 7, lines 50-56). The collection of oxygen is disclosed in col. 7, lines 48-50).

The patent while teaching the use of solar power does not disclose the use of photovoltaic having at least one triple junction solar cell. The Ichinose patent is cited to show use of a triple junction solar cell to produce electricity from solar rays (see figures 1a and 3 and col. 1, line 43 to col. 2, line 25).

Consequently, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Hollenberg patent with the teachings of the Ichinose patent, because the Ichinose patent teaches the use of a conventional photovoltaic cell having a triple junction. The type of water from which the hydrogen and oxygen

Art Unit: 1753

are produce would fail to distinguish another apparatus using a different type of water to produce the hydrogen and oxygen in an apparatus claim.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollenberg applied as above in view of Hancock et al. (Hancock), U.S. Patent 3,754,147.

The Hollenberg patent does not disclose the use of brackish water as the source of the water being used to produce the hydrogen and oxygen. The Hancock patent is cited to show it is known in art of the electrolysis of water to use seawater to produce the hydrogen and oxygen by electrolysis (see Abstract).

Therefore, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Hollenberg patent with the teachings of the Hancock patent, because the Hancock patent teaches the use of seawater as the water from which hydrogen and oxygen can be obtained by electrolysis.

Allowable Subject Matter

Claims 7-10 are allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

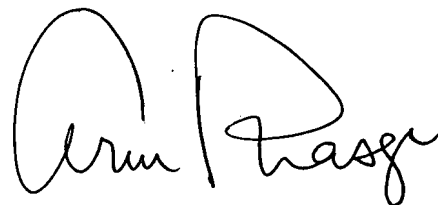
The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record fairly discloses or renders obvious the claimed hydrogen purification apparatus in the dependent claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Arun Phasge', with a large, stylized initial 'A' and 'P'.

Arun S. Phasge
Primary Examiner
Art Unit 1753

asp